

Appl. No. 09/965,253  
Amdt. Dated June 30, 2005  
Reply to Office action of April 5, 2005

### REMARKS/ARGUMENTS

Claims 1-30 are pending in the present application.

This Amendment is in response to the Office Action mailed April 5, 2005. In the Office Action, the Examiner rejected claims 1-30 under 35 U.S.C. §103(a). Reconsideration in light of the amendments and remarks made herein is respectfully requested.

#### *Comment's on Examiner's Arguments*

1. Applicant does not attack references individually and Examiner mis-reads Keller and Merck:

In the Office Action, the Examiner states that "one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references." The Examiner then cites *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) to support the contention. Applicant respectfully disagrees.

First, Applicant did not attack the references individually. Applicant argues that there is no suggestion in each of the references for the combinations. In order to combine references for an obviousness rejection, there must be some suggestion to combine in the references.

Second, Keller and Merck are not applicable in the present instance because the prior art references Keller and Merck teach, disclose, and suggest the claimed invention. On the contrary, as Applicant has argued, there is no suggestion, teaching, or disclosure of an ESD clamp circuit in Yue or an inductor coupled to an ESD circuit as claimed in Waggoner. The Examiner apparently mis-reads Keller and Merck.

In Keller, the Examiner rejected claims directed to cardiac pacer apparatus with digital timers basing on two principal prior art references, Keller and Berkovits, and one secondary reference, Walsh. Both Keller and Berkovits relate to cardiac pacer using analog timers while Walsh is relied on only for the teaching of digital timing in a heart stimulator.

The Court affirmed the Board's decision to uphold the Examiner's rejection. Citing In re Winslow, 53 CCPA 1574, 365 F.2d 1017, 151 USPQ 48 (1966), as modified in *In re Antle*, 58 CCPA 1382, 444 F.2d 1168, 170 USPQ 285 (1971). The Court stated "[b]oth Keller and Berkovits disclose heart stimulators that use R-C type timing circuits. Walsh teaches the use of

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digital type timing circuits in place of R-C type timing circuits in conventional heart stimulators. Therefore, the question is whether it would have been obvious to one of ordinary skill in the art, working with the Keller and the Berkovits and the Walsh references before him, to do what the inventors herein have done, that is, to use a digital timing circuit in a cardiac pacer". See Keller at 881. The Court rejected the Appellant's argument that the teachings of Walsh cannot be properly combined with those of either Keller or Berkovits because Walsh does not relate to a cardiac pacer. The Court stated "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the reference. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art". Citing In re Wood, 599 F.2d 1032, 202 USPQ 171 (CCPA 1979); In re Passal, 57 CCPA 1151, 426 F.2d 828, 165 USPQ 720 (1970); In re Richman, 57 CCPA 1060, 424 F.2d 1388, 165 USPQ 509 (1970); In re Rossetet, 52 CCPA 1533, 347 F.2d 847, 146 USPQ 183 (1965).

The Court also rejected the Appellant's argument that the Board did not accord appropriate weight to an expert's affidavit. The expert's affidavit concerns itself mainly with the question of whether Walsh suggests the use of digital timing in a cardiac pacer. In rejecting this argument, the Court stated "one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references". Citing In re Young, 56 CCPA 757, 403 F.2d 754, 159 USPQ 725 (1968). See Keller at 882. The Court further stated that "the test is not whether a suggestion to use digital timing in a cardiac pacer is found in Walsh as applied by the expert, but rather what Keller in view of Walsh and what Berkovits in view of Walsh have suggested to one of ordinary skill in the art." See Keller at 882.

In Merck, the invention is a method of treating human mental disorders involving depression. The method includes orally administering amitriptyline or its nontoxic salts. There are a total of nine prior references. Ray-Bellet disclosed amitriptyline and its hydrochloride salt but did not disclose that amitriptyline possess antidepressive properties. Kuhn disclosed imipramine, a compound having a chemical structure very similar to that of amitriptyline and taught that it was a very effective antidepressant in humans. Kuhn disclosed that imipramine differs from the structure of amitriptyline only in the replacement of the unsaturated carbon

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dioxide in the center ring with a nitrogen atom. Lehman disclosed results of a study of the effects on imipramine on the symptoms of depression. Freidman disclosed the theory of "isosteric replacements" or "bio-resisteric replacement" as a tool to predict the properties of compounds. Burger discussed the theory of bioisosterism and its usefulness in designing new drugs. Petersen taught the properties of chlorpromazine and chlorprothixene and predicted the similarity in properties using the theory of isosteric replacement. The difference merely involves the nitrogen atom located in the central ring of one compound and an unsaturated carbon atom in the other compound. Roche reports revealed the results from tests comparing the pharmacological properties of amitriptyline and imipramine and concluded that amitriptyline should be tested for depression alleviation because of the structural similarity between amitriptyline and imipramine.

The Court stated that "[i]n view of these teachings which show a similar use (psychotropic drugs) between amitriptyline and imipramine, one of ordinary skill in the medicinal arts, possessed of the knowledge of the investigative techniques used in the field of drug design and pharmacological predictability, would have expected amitriptyline to resemble imipramine in the alleviation of depression in humans". The Court went on to reject the Appellant's argument that the Board's decision was premised on an impermissible "obvious to try" standard. In rejecting the Appellant's arguments that Petersen teaches away from Appellant's decision, the Court stated that "[n]on-obviousness cannot be established by attacking reference individually where the rejection is based upon the teachings of a combination of reference", citing Keller. The Court stated that "Petersen must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole. That teaching is that the interchange of the nitrogen and the unsaturated carbon atoms is isosteric and compounds so modified are expected to possess similar biological properties". See Merck at 380.

Neither Keller nor Merck is appropriate in the instant case. In Keller, the Court rejected the argument that the secondary reference does not suggest its application in the primary reference. The Court reasoned that the obviousness is based on what the primary reference in view of the secondary reference would have suggested, not the reverse. In Merck, the Court rejected the argument that one of the references teaches a different compound. The Court reasoned that this reference is relied on for its teaching of the predicted similarity between two

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compounds when one element is interchanged with another, not for its teaching of different compound.

**2. The Examiner's rejections amount to an impermissible hindsight reconstruction:**

In the Office Action, the Examiner states that "Examiner agrees with applicant's argument that Yue fails to teach the above claimed feature. But the rejections are based on the combinations of references. Providing an ESD clamp circuit ... is well known in the art and this teaching is taught by Waggoner.." (Office Action, page 2). Applicant respectfully disagrees. As discussed above, to combine references, there must be a suggestion or motivation to combine. Yue not only fails to disclose the ESD clamp circuit, Yue does not suggest the combination. Therefore, combining Yue with any other references is improper. In essence, the Examiner combines the references as a hindsight reconstruction which is impermissible. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) The claimed invention must be considered as a whole; (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) Reasonable expectation of success is the standard with which obviousness is determined. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." In re Mills 916 F.2d at 682, 16 USPQ2d at 1432; In re Fitch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992).

The Examiner failed to show there is a suggestion in the cited prior art references for the combination. The Examiner merely states that an ESD clamp circuit "is well known in the art". In fact, assuming that this is true, i.e., an ESD clamp circuit was well known at the time of the prior art references, but Yue was silent about suggesting an ESD clamp circuit. This even shows that it was not obvious to Yue, or to one skilled in the art, to combine Yue teaching with an ESD clamp circuit.

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3. Waggoner does not disclose or suggest an ESD clamp circuit coupled to the inductor via the EDS circuit:

In the Office Action, the Examiner states that "[t]he circuit (B shown in figure 7) is the clamp circuit and is coupled between the power supply (special rail  $V_{dd}$  112 is power supply) and the ground (114) in order to clamp the power supply at the operating voltage level in ESD event (e.g. col. 7, lines 52-61)." (Office Action, pages 2-3). However, this ESD clamp circuit is not coupled to the inductor via the ESD circuit as claimed. Waggoner does not disclose or suggest an ESD circuit as argued in the previous response.

***Rejection Under 35 U.S.C. § 103***

1. In the Office Action, the Examiner rejected claims 1, 2, 5-7, 9-12, 15-17, 19-22, 25-27, 29, and 30 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,509,779 issued to Yue et al. ("Yue") in view of U.S. Patent No. 6,034,400 issued to Waggoner et al. ("Waggoner"), claims 3, 4, 13, 14, 23, and 24 under 35 U.S.C. §103(a) as being unpatentable over Yue in view of Waggoner and further in view of U.S. Patent No. 5,969,929 issued to Kleveland et al. ("Kleveland"), and claims 8, 18, 28 under 35 U.S.C. §103(a) as being unpatentable over Yue in view of Waggoner and further in view of U.S. Patent No. 6,414,849 issued to Chiu ("Chiu"). Applicant respectfully traverses the rejection and contends that the Examiner has not met the burden of establishing a prima facie case of obviousness.

Applicant reiterates the arguments set forth in the previously filed Response to the Office Action.

Yue discloses a system for providing electrostatic discharge protection for high-speed integrated circuits. An inductor is connected in series between a conductor and an ESD protection circuit via another conductor (Yue, Col. 3, lines 48-51).

Waggoner discloses an integrated circuit with improved electrostatic discharge protection including multi-level inductor. A circuit 110 has a special rail 102. Bias circuits B at the ends of the special rail 102 are connected to the high and low voltage supplies  $V_{DD}$  and  $V_{SS}$  (Waggoner, col. 6, lines 48-51). Diode  $D_1$  connects the low voltage rail 114 to respective input bonding pads P, and diode  $D_3$  connects P to the special rail 102 (Waggoner, col. 6, lines 65-67).

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Kleveland discloses a distributed ESD protection device for high speed integrated circuits. A distributed ESD protection circuit uses a resistor in series with a diode as an ESD element (Kleveland, Col. 5, line 31-33). Another embodiment uses thick field oxide transistors for ESD elements. The circuit includes a pad, transmission line elements, diode configured NMOS transistors, and a buffer (Kleveland, Col. 5, line 46-50).

Chiu discloses a low stress and low profile cavity down flip chip and wire bond BGA package. A thermoset transfer molding process from a liquid crystal polymer (LCP) plastic is used to form package substrates, each having upraised standoff posts and a central cavity much deeper than the integrated circuit die thickness (Chiu, Col. 6, lines 64-67; Col. 7, lines 1-5).

Yue, Waggoner, Kleveland and Chiu, taken alone or in any combination, does not disclose, suggest, or render obvious (1) an inductor connected in series between an output of a high frequency circuit and an ESD circuit; and (2) an ESD clamp circuit coupled to the inductor via the ESD circuit between supply and ground terminals to clamp a supply voltage at a predetermined level.

Yue merely discloses an inductor used in conjunction with an ESD circuit. Waggoner merely discloses a bias circuit that is connected to a special rail, the high voltage rail, and the low voltage rail (Waggoner, col. 7, lines 15-16; lines 27-29), not a clamp circuit between supply and ground terminals to clamp a supply voltage at a predetermined level. Furthermore, Waggoner does not disclose or suggest an ESD circuit. Kleveland merely discloses various embodiments of a distributed ESD device. Chiu merely discloses a wire bond BGA package. None of them discloses or suggests a clamp circuit coupled to the inductor via the ESD circuit between supply and ground terminals.

The Examiner failed to establish a prima facie case of obviousness and failed to show there is teaching, suggestion or motivation to combine the references. "When determining the patentability of a claimed invention which combined two known elements, 'the question is whether there is something in the prior art as a whole suggest the desirability, and thus the obviousness, of making the combination.'" In re Beattie, Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 1462, 221 USPQ (BNA) 481, 488 (Fed. Cir. 1984). "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the

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Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973. (Bd.Pat.App.&Inter. 1985).

Therefore, Applicant believes that independent claims 1, 11, 21 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

### ***Conclusion***

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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